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TITLE: LASER BEAM WELDING HEAD  
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INVENTOR-INFORMATION:

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ABSTRACT:

PURPOSE: To provide a laser beam welding head responding to a prescribed important matter by eliminating a defect of a welding nozzle.

CONSTITUTION: This laser beam welding head is provided with a nozzle 10 having an extremely small outlet diameter (d), (d) is 2.5 mm in the case of a CO2 laser beam 6 having the focal distance of 150 mm, the nozzle 10 is provided with a conical inner surface 11, the half angle in the apex is 15 degrees in the case of the laser beam 6, the surface state being Ra 0.8 is also excellent, and an outlet zone is provided with a shelf part having the radius(r) nearly

equal to two times the nozzle outlet diameter( $d$ ).

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